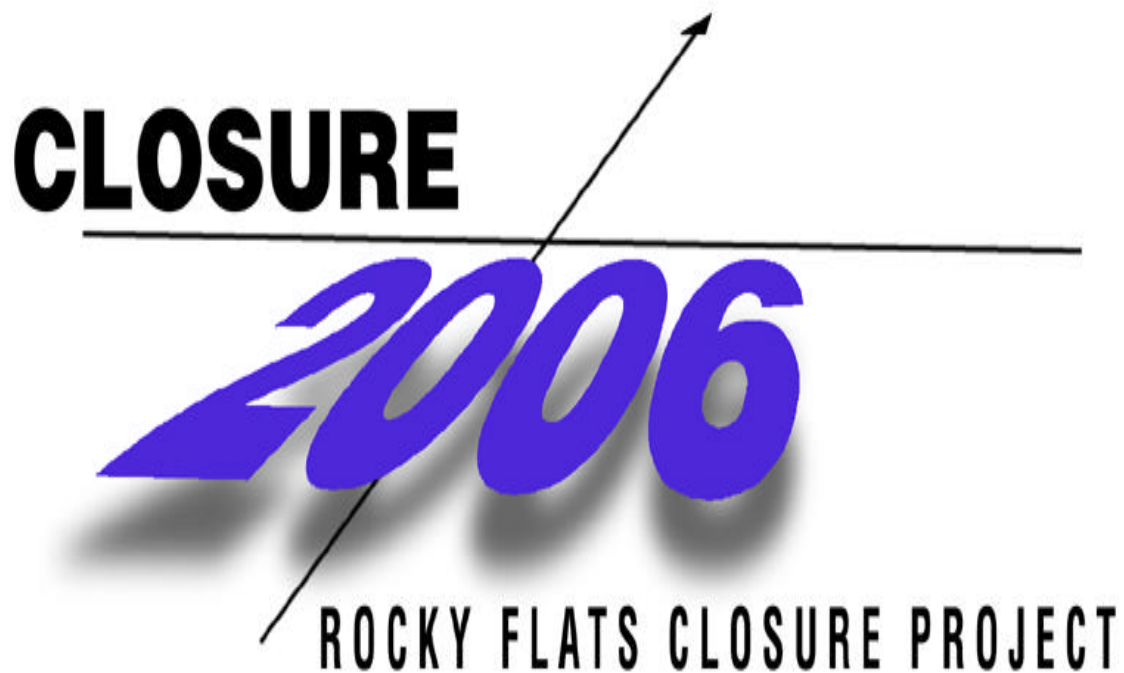


The Rocky Flats Closure Project Management Plan



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1.0 Executive Summary

The Rocky Flats Environmental Technology Site (Site) was designated an *Accelerated Closure Pilot Project* by the Secretary of Energy in August 1997. This management plan outlines specific actions that the Department of Energy (DOE) is taking to accelerate the cleanup and closure of Rocky Flats.

The DOE chose Rocky Flats as one of the first *Accelerated Closure Pilot Facilities* for several reasons. Rocky Flats is the largest former nuclear weapons production site positioned to be closed by 2006. The Site houses some of the most dangerous and highest risk materials and facilities in the nuclear weapons complex. Maintaining a safe and secure work environment at Rocky Flats costs \$400 million per year out of nearly a \$700 million site annual budget. Closing Rocky Flats early will eliminate this fixed cost, thus saving the taxpayers hundreds of millions of dollars.

Closing Rocky Flats requires DOE-wide integration and cooperation to ensure the availability of receiver sites and the management of shipping networks so that material and waste can be expeditiously moved from Rocky Flats to receiver sites throughout the complex. The Department's efforts to accelerate closure of Rocky Flats will also generate lessons learned that will benefit other DOE cleanup sites throughout the country.

At the conclusion of the project and in full consultation with local communities and stakeholders, special nuclear material (SNM) and waste will be removed from the Site, buildings will be demolished, and environmental cleanup will support future open space and light industrial uses. DOE is currently engaged in discussions with local communities and stakeholders on issues that affect the final disposition of Rocky Flats. Again, the Department will work to resolve these issues with the full consultation of the communities and stakeholders.

Already, significant progress has been made toward achieving the end state. Most notably, 12,400 liters of plutonium and highly enriched uranium solutions have been drained from tanks on site, 75 shipments of SNM have left the Site, 52 buildings have been demolished, 20 sites with environmental contamination have been cleaned up, 62,000 pieces of property have been dispositioned, and 10,800 cubic meters of low level and low level mixed waste have been shipped off site for final disposal.

The DOE Rocky Flats Closure Project Team's commitment to accelerate closure is embodied in the four strategic initiatives that have been adopted to lead the closure objective: 1) Accelerate

shipment of materials and wastes from the Site; 2) Minimize the construction of new facilities or process capabilities at the Site; 3) Organize the Site workforce for accelerated closure; and 4) Develop and execute a business strategy consistent with accelerated closure. Each of these initiatives is supported by a number of specific actions that are detailed in Appendix B. These actions, in turn, comprise a summary of the detailed work breakdown provided in the Rocky Flats closure project plan for a 2006 closure, which will be finalized over the next several months.

Clearly defined management roles and responsibilities are essential to the accomplishment of accelerated closure. Key roles in delivering the project are shared by the Secretary and Deputy Secretary of Energy, the Rocky Flats Closure Project Manager, the Headquarters Rocky Flats Closure Team, and the Integrating Management Contractor. Specific responsibilities are delineated for each of these major roles. Project progress will be tracked at the monthly meeting of the Headquarters Rocky Flats Closure Team. These monthly meetings will also serve as a forum to resolve issues that have the potential to affect the schedule for accelerated closure.

The Rocky Flats 2006 Closure Project is an ambitious undertaking that requires a focused effort by DOE in order to succeed. Details of this challenge are outlined in this plan. It is a challenge that DOE enthusiastically embraces and one that demonstrates DOE's commitment to cleaning up the legacy of the Cold War.

2.0 Introduction

At the height of the Cold War, 16 major facilities located across the United States were dedicated to development, materials production and recovery, manufacturing, maintenance, and testing for the United States nuclear weapons stockpile. This nuclear weapons complex was responsible for creating the powerful deterrent that won the Cold War. Rocky Flats manufactured the nation's supply of plutonium triggers, or "pits," for nuclear weapons. In the wake of that victory, however, we are left with a vast legacy of environmental contamination in the form of high risk materials that require stabilization or repackaging before they can be properly stored, severely contaminated buildings, and large areas of contaminated soil. The timely and cost effective cleanup of that contamination represents one of the most difficult challenges facing DOE.

The accelerated cleanup and closure of the Site embodies a significant opportunity as well as a challenge. Less than four years ago cleanup and closure of Rocky Flats was predicted to take over 30 years, at a cost in excess of \$30 billion. As the result of an aggressive change in approach instituted by the Department and the Site in 1995, the closure project was slated to be complete by the year 2010 at a cost of \$7.3 billion. In August 1997, Secretary Peña designated Rocky Flats as an *Accelerated Closure Pilot Project*, challenging the Site to accelerate the closure to 2006, thereby shaving four additional years and \$1.3 billion dollars from the project. The critical path for closure of Rocky Flats is depicted at a summary level in Appendix A. This chart shows the critical activities and project sequencing required for closure.

Dramatic reductions in cost and schedule have been realized by fundamentally changing the culture at Rocky Flats from an *operations and maintenance* culture to a *project* culture. Supporting the implementation of these reductions have been the development of a closure project baseline, a detailed work breakdown structure showing discrete steps to be taken between now and closure, and the execution of a performance-based contract that pays incentives when the contractor meets pre-defined objectives that support accelerated closure. The role of DOE has shifted from managing the contractor to managing the contract — in essence driving performance through the use of predictable management systems.

This *Rocky Flats Closure Project Management Plan* will guide the accomplishment of accelerated closure. The plan outlines the project's objectives, scope, schedule, organizational structure, roles and responsibilities, and actions required for closure in 2006. The four strategic initiatives specified for enabling accelerated closure are detailed with schedules for completion in Appendix

B, “Specific Commitments.” By defining both deadlines and responsibilities, this management plan will serve as the tool by which the Secretary of Energy can hold the Rocky Flats Team accountable for the safe, accelerated, and efficient completion of the Rocky Flats Closure Project. The plan provides both the institutional framework and permanent Secretarial-level focus needed to ensure success.

The accelerated closure of Rocky Flats embodies core values and initiatives of the Department of Energy. The implementation of contract reform, public/private sector partnering, community openness, regulatory reinvention, and a focus on worker safety at Rocky Flats will make the Site one of the first in the nuclear weapons complex to achieve accelerated closure. Throughout the accelerated closure project, the Rocky Flats Closure Project Team will be guided by three principles underlying DOE’s work at its sites throughout the country: 1) work closely at every step with communities, workers, elected leaders, and regulators; 2) do not compromise safety — the project will be considered successful only if there is no harm done to workers, communities, and the environment; and 3) maintain and meet cleanup standards agreed upon by the regulators and the community.

This management plan will, and indeed must, change over time. Only by continuously challenging the status quo, constantly re-evaluating strategies, responding creatively to changing circumstances, streamlining methods, and aggressively seeking new approaches and technologies can the 2006 goal be met.

3.0 Project Objectives

The primary objective of the Rocky Flats Closure Project is to eliminate a major safety and environmental risk and a \$700 million yearly expenditure. To achieve the primary goal of safe closure, the Rocky Flats Closure Project Team has defined a hierarchy of objectives. The successful achievement of these objectives will demonstrate DOE's ability to meet the challenge of efficient and safe environmental cleanup and site closure.

This section of the management plan details the objectives of the closure project, including the end state for the Site as defined in the Rocky Flats Cleanup Agreement and the activities to be performed to realize the end state. The major assumptions identified for achieving the 2006 closure, a list of recent accomplishments of the Rocky Flats workforce, near term goals to be achieved during the next two and one-half years, and the key agreements that have been put into place to permit an accelerated closure of Rocky Flats are also presented in this section.

Benefits of Accelerated Closure

Achieving the accelerated closure of Rocky Flats benefits not only the communities surrounding the Site, but DOE and the entire country as well. These benefits are summarized as follows:

Accelerated closure eliminates a major safety and environmental risk. More than 2.5 million people live within a 50-mile radius of Rocky Flats, which houses over 14 tons of weapons-grade nuclear material and numerous highly contaminated facilities. In fact, Building 771, a former plutonium processing facility, had been characterized by the media as “the most dangerous building in America.” The accelerated cleanup and closure of Rocky Flats will eliminate a significant hazard to the surrounding communities, the State of Colorado, workers, and the environment.

Accelerated closure eliminates a \$400 million per year fixed cost. The annual cost of safeguarding nuclear material, maintaining a safe work environment inside and outside the nuclear facilities, and prohibiting environmental releases approaches \$400 million per year — over half of the Rocky Flats annual budget of nearly \$700 million. Although increasingly efficient operations have resulted in significant reductions in the annual fixed cost for the operation and maintenance of the aging facilities, cleaning up and closing the Site will permanently remove this liability — freeing up financial resources for other important cleanup priorities.

Accelerated closure will contribute important lessons learned and a blueprint to be followed for the difficult cleanup challenges faced by other sites in the DOE weapons complex. Rocky Flats is the largest and most technically challenging nuclear decommissioning project slated for early completion. Many of the problems faced at Rocky Flats are, and will be, encountered at other DOE cleanup sites throughout the country. The application of lessons learned from Rocky Flats will be an essential ingredient in successfully and safely cleaning up the remainder of the DOE weapons complex.

Accelerated closure will demonstrate DOE's ability to successfully meet the challenge of efficient and safe environmental cleanup. Rocky Flats is the largest DOE site that can achieve closure by 2006, yet it is also one of the most daunting environmental cleanups facing the federal government. Successful accomplishment of the 2006 closure will demonstrate that DOE is up to the challenge. As the *Denver Post* recently noted "... by meeting deadlines at Rocky Flats, DOE — and ultimately Congress — can show the American people that the federal government possesses the political will to mop up the messes that Uncle Sam created during the Cold War."

End State and Major Activities

The closure project is best defined by the proposed "end state" described in the Rocky Flats Cleanup Agreement (RFCA) signed by DOE, the Environmental Protection Agency, and the Colorado Department of Public Health and Environment in July 1996. The RFCA end state is defined as follows:

- Plutonium, enriched uranium, and wastes will be shipped off site.
- Buildings will be demolished.
- Environmental cleanup will be sufficient to support the following land uses:
 - Less than 100 acres of the current industrial/nuclear area will be capped with access controls.
 - About 300 acres of the industrial area will be available for re-use as light industrial sites.
 - The remaining 6,100 acres will be re-used as open space.
- Long-term monitoring and institutional controls will be established.
- Essentially all staff (federal and contractors) will be eliminated.

- All surface water leaving the Site will be safe, for any and all uses.

Acceleration allows this proposed end state to be accomplished four years sooner than scheduled under the Site's most recent plan. The accelerated closure, however, does not change the proposed end state. Achieving this end state requires completion of several major activities:

Major Activity	Planned Strategy/Path Forward*
9.8 MT Pu metals and oxides	Stabilize, package, and ship pits to Pantex and metals and oxides to SRS
30,000 liters Pu/eU solutions	Drain, stabilize, package, and ship
3.1 MT Pu in 106 MT residues	Treat, package, and ship to SRS, LANL, or WIPP
6.7 MT eU	Stabilize, package, and ship to Oak Ridge Reservation
100 kg Pu holdup	Locate, remove, treat, package, and ship
9,500 m ³ TRU/TRUM waste	Package and ship to WIPP
146,000 m ³ LLW/LLMW	Package and ship to NTS, Envirocare, etc.
160,000 m ³ sanitary wastes	Collect and dispose
170 environmental sites	Remediate, reclassify, and release
2,800,000 ft ² buildings (770 facilities)	Decommission, demolish, remediate, and release
1,200 ft ³ classified records	Ship, declassify, or destroy
1,000,000 line items excess property	Sell, redeploy, and dispose

* Where applicable, pending the Records of Decision from NEPA reviews.

Definitions: Pu-plutonium, eU-enriched uranium, MT-metric ton, TRU-transuranic waste, TRUM-mixed transuranic waste, LLW-low level waste, LLMW-low level mixed waste, SRS-Savannah River Site, NTS-Nevada Test Site, LANL-Los Alamos National Laboratory, WIPP-Waste Isolation Pilot Plant.

Closure Project Assumptions

In order to successfully achieve a 2006 closure of Rocky Flats, the following are the closure project assumptions:

- Funding will be provided at \$650 million per year in FY99 and FY00, and an average of \$600 million per year from FY01 through closure (constant FY98 dollars).
- All work will be performed consistent with the processes and requirements outlined in the RFCA.
- Receiver sites will be identified to accept materials, including special nuclear materials, waste, records, and property.
- Productivity at the Site will improve by at least 12 percent per year.

- Work will be done in a safe and responsible manner. The project will be considered successful only if no harm is done to the workers, the communities, or the environment.

Recent Accomplishments

Much has been accomplished in the last three years in the areas of risk reduction, mortgage reduction, and waste disposal. Highlights of recent achievements at Rocky Flats are included below.

Special Nuclear Material Stabilization, Consolidation, and Repackaging

- Drained 9,800 liters of plutonium solutions.
- Drained 2,700 liters of highly enriched uranium solutions.
- Stabilized and repackaged 2,200 kgs of residues.
- Decontaminated 144 enriched uranium parts.

Facility Decommissioning and Demolition

- Demolished 52 buildings (more than 114,000 ft²).

Environmental Remediation

- Remediated 20 environmental restoration sites.
- Characterized 22 sites and secured 22 no further actions (i.e., determined with the regulators that no additional activities are warranted).

Off-site Shipment

- Shipped 65 shipments of plutonium pits and parts off site.
- Shipped 12 shipments of enriched uranium parts off site.
- Disposed 8,100 cubic meters of low level mixed waste off site.
- Disposed 2,700 cubic meters of low level waste off site.

Property and Classified Document Disposition

- Dispositioned 62,000 items of excess property.

- Shipped, declassified, or destroyed 90 percent of the classified records backlog.

Near Term Goals

Rocky Flats is poised for success. The Site's workforce has accomplished a great deal, and with continued support it will accomplish much more. In the next two and one-half years, the following major closure accomplishments are expected:

- Remove all plutonium pits from the Site.
- Remove all highly enriched uranium from the Site.
- Demolish the first major plutonium facility in the weapons complex, Building 779.
- Dispose of 3,000 cubic meters of transuranic waste in the Waste Isolation Pilot Plant, 31 percent of the total projected Rocky Flats volume.
- Dispose of 43,000 cubic meters of low level radioactive wastes, 29 percent of the total projected Rocky Flats volume.

Key Agreements

Over the past three years, the Site has received unprecedented support for accelerated closure from the Congress, state and local officials, communities, and stakeholders. In part, this support is based upon the establishment of several key agreements that will enable accelerated closure. These key agreements include:

Rocky Flats Cleanup Agreement (RFCA). The RFCA focuses on tangible milestones rather than process-driven documentary deliverables to complete closure activities. It is a regulatory document that defines the project's end state and establishes the regulatory framework for such accomplishments. The RFCA creates a framework for timely decision-making, assigns funding to the highest Site priorities, and clearly defines the roles and responsibilities of various regulators.

Steelworkers Collective Bargaining Agreement. In October 1996, the Integrating Management Contractor, Kaiser-Hill, signed a new collective bargaining agreement that fundamentally changed the way the Site's hourly work force is employed. The Agreement provides the flexibility and productivity improvements needed to successfully accomplish accelerated closure.

Project Labor Agreement. Signed in December 1997, this agreement governs all construction work performed at Rocky Flats, fully incorporating all Davis-Bacon requirements.

Work Assignment Guidelines. Negotiated in 1996, this agreement between the Steelworkers Union and the Building Trades Union delineates work jurisdiction between these unions. The agreement also establishes a process for arriving at work determinations for every project at the Site.

The Rocky Flats Closure Project Team has laid significant groundwork for the achievement of the closure project. The plan is defined, the agreements are executed, and team is assembled. DOE's commitment to accelerating the closure of Rocky Flats will reap the many benefits of closing a nuclear weapons facility and will create a blueprint for closure, cleanup, and restoration.

4.0 Strategic Initiatives

Committing to accelerated closure means that Rocky Flats and DOE must undertake several strategic initiatives to succeed. These initiatives are described below. More detailed, specific commitments for each initiative are provided in Appendix B.

Strategic Initiative 1

Accelerate Shipment of Materials and Waste from Rocky Flats

To meet the end state outlined in the Rocky Flats Cleanup Agreement and the *Paths to Closure*, the Rocky Flats workforce must ship the inventories of special nuclear materials, wastes, excess property, and records to appropriate receiver sites. Accelerating removal of these materials is critical to accelerating Site closure to 2006. The key challenge for the Department is to have receiver sites ready and able to accept Rocky Flats materials and be able to transport these materials expeditiously.

In some cases, where sites are available today, such as the Nevada Test Site and Pantex, DOE must work to keep those sites available. In other cases, where a site is not yet available, such as the Waste Isolation Pilot Plant (WIPP) and the Savannah River Site (SRS), DOE must identify a path forward for these sites to accept materials from Rocky Flats. In every case, DOE must ensure the timely completion of all National Environmental Policy Act (NEPA) reviews. The following major commitments have been established to meet this strategic initiative.

- Ship plutonium metals and oxides to another site.
- Complete the shipment of plutonium pits to Pantex.
- Complete the shipment of enriched uranium to the Oak Ridge Reservation.
- Treat and ship plutonium residues.
- Package, ship, and dispose of transuranic and low level wastes.
- Disposition excess property and records.

Strategic Initiative 2

Minimize Construction of New Facilities or Process Capabilities at Rocky Flats

To meet the challenge of accelerated closure, the Rocky Flats workforce must focus on demolition and closure rather than on construction and continued operations. If the processing of materials or wastes is required, and if that capability does not already exist at Rocky Flats, and if such work can be done more effectively at another DOE site, then it is best to assign these efforts to other sites with ongoing missions (e.g., Los Alamos National Laboratory, Savannah River Site).

Avoiding the construction of new facilities or processes at Rocky Flats allows resources that would otherwise be used to construct, operate, and demolish these facilities or processes to be focused exclusively on the cleanup and closure mission. The key challenge for DOE is to make sound decisions using the assets and capabilities of the entire Department and to evaluate alternatives on a complex-wide basis. Major commitments in place to meet this strategic initiative include:

- A new vault to store special nuclear materials will not be constructed.
- A new facility to store transuranic waste will not be constructed.
- A new facility to store low level waste will not be constructed.

The feasibility of constructing and operating each of the above facilities was thoroughly evaluated during the development of the project plan and schedule. In each instance, it is believed that off-site shipment and storage or disposal is most appropriate. If, however, a receiver site is not available for any one of these materials, on-site storage could be constructed as a contingency. It is possible that one of these contingency storage facilities could be constructed and operated without having a significant impact on the accelerated closure schedule. However, if more than one facility is required, then closure by 2006 would be jeopardized.

Strategic Initiative 3

Organize for Closure

Critical to making accelerated closure a success is the retention of key personnel. The challenge for the Department is to develop and execute an innovative plan that allows DOE and its contractors to simultaneously encourage people to work themselves out of a job and transition to a new career, while at the same time retaining essential personnel (both federal and contractor) at

Rocky Flats to complete the closure mission. To meet this challenge, the Department must provide various incentives for both retention and workforce reduction. Some of these incentives may require legislation or other action. Major commitments in place to meet this strategic initiative include:

- Develop comprehensive personnel resource management plans.
- Organize federal and contractor staffs to focus on closure.

Strategic Initiative 4

Develop and Execute a Business Strategy Consistent with Accelerated Closure

The objective of the last major initiative is to align DOE's business strategies with the needs of accelerated closure. Business strategies include the manner in which DOE manages itself and its contractor to accomplish accelerated closure. Specific activities include aligning contracting strategies and methods, reviewing internal management practices, and removing unnecessary layers of management or bureaucracy that impede acceleration. DOE must also develop a strategy that contains the right mix of incentives and penalties to drive the contractor to accomplish closure at the earliest possible date. The outcome of this initiative will be a management structure and process that can deliver the closure of Rocky Flats at the least cost, in the shortest amount of time, and in a safe and responsible manner. Major commitments include:

- Develop contracting and incentives strategies that align with accelerating closure.
- Finalize and validate a 2006 closure project baseline.
- Develop contract incentives that drive safe closure of the Site.

In order to accelerate closure, the Rocky Flats Closure Project Team must commit to accelerating shipment of materials and waste, the elimination of new facility construction or process capabilities, organizing for closure, and the development and execution of a business strategy consistent with accelerated closure. A detailed action plan has been developed for each strategic initiative presented in this section. The major actions to achieve each strategic initiative are described in Appendix B, Specific Commitments.

5.0 Management Roles and Responsibilities

Achieving success for the 2006 closure project hinges on the expertise and commitment of many individuals. Key players in the implementation of this management plan include the Senior Governmental Official, the Rocky Flats Closure Project Manager, the Headquarters Rocky Flats Closure Team, and the Integrating Management Contractor. The roles and responsibilities of these individuals and entities are described in this section of the plan.

Senior Governmental Official. The Deputy Secretary of Energy serves as the Senior Governmental Official for the Rocky Flats Closure Project. In the past the Senior Governmental Official role was filled by the Assistant Secretary for Environmental Management. However, accelerated closure of Rocky Flats requires first-of-a-kind integration actions by a number of different DOE organizations. In recognition of these substantial integration requirements and the urgency with which issues must be resolved in order to achieve closure by 2006, the Deputy Secretary has been designated as the Senior Governmental Official. The Deputy Secretary is directly supported by the Assistant Secretary for Environmental Management. The Senior Governmental Official's responsibilities include:

- Review monthly updates from the Rocky Flats Closure Project Manager and convene monthly Headquarters Rocky Flats Closure Team meetings.
- Track progress against cost and schedule and determine areas where intervention or assistance may be required.
- Resolve issues and requirements that involve multiple offices and/or multiple sites.
- Hold the Rocky Flats Closure Project Manager accountable for the accomplishment of interim and final milestones.
- Forward recommendations on issues that must be resolved at the Secretarial level.

Rocky Flats Closure Project Manager. The Rocky Flats Field Office Manager is the Project Manager. The responsibilities of the Project Manager are:

- Provide monthly project updates to the Deputy Secretary.
- Establish the scope, schedule, and funding requirements for the project.

- Ensure that project support is in place to deliver the project on time and within budget, including such items as the refinement and validation of a project baseline, change control management, and safety infrastructure.
- Ensure the performance of the contractor and ensure that the contract structure facilitates accelerated closure, including the appropriate contractor, business relationships, incentive structure, and performance metrics.
- Maintain productive relationships with stakeholders.
- Report progress to Headquarters and stakeholders on a routine basis.
- Work with Headquarters and other affected sites to assist in integrating closure project needs with the requirements of other programs and sites.

Headquarters Rocky Flats Closure Team. A permanent team of senior level DOE officials, chaired by the Deputy Secretary, meets monthly to resolve issues that affect the accelerated closure of Rocky Flats. Every DOE program office that affects or can affect the closure of Rocky Flats is represented by that office's senior official. The Team's role is to work closely together to make accelerated closure a reality. Any issue that cannot be resolved by this Team is decided upon by the Deputy Secretary or the Secretary. The technical and management challenges of dealing with the safety and environmental hazards associated with cleaning up a site with the degree of contamination at Rocky Flats are formidable. There must be a sustained, overriding expectation that this accelerated closure will not endanger the health and safety of our workers, the public, or the environment. DOE tracks the progress of critical path activities at Rocky Flats through this monthly exchange and holds the Team accountable for specific milestones critical to closure in 2006. The Assistant Secretary for Environmental Management is responsible for ensuring that the needed resources and management infrastructure are made available. The Team's responsibilities include:

- Monitor monthly updates from the Rocky Flats Closure Project Manager to the Deputy Secretary.
- Actively seek ways to assist with accelerated closure, including generating new ideas and strategies to shorten the schedule or generate cost savings.
- Integrate issues across the complex in a manner that achieves accelerated closure.
- Ensure that the accelerated closure of Rocky Flats remains a DOE priority.

The Headquarters Rocky Flats Closure Team is composed of the following individuals:

- Deputy Secretary of Energy
- Assistant Secretary for Environmental Management
- Assistant Secretary for Defense Programs
- Assistant Secretary for Human Resources and Administration
- Assistant Secretary for Environment, Safety and Health
- General Counsel
- Chief Financial Officer
- Manager, Rocky Flats Field Office
- Director, Office of Nuclear Non-Proliferation
- Director, Field Management
- Director, Office of Fissile Material Disposition
- Director, Office of Worker and Community Transition

Integrating Management Contractor. In 1995, Rocky Flats shifted from a Management and Operating (M&O) contractor, where a single contractor performed most of the work at the Site, to a Performance-Based Integrating Management Contractor (PBIMC). The PBIMC selects and manages an array of specialty subcontractors that perform specific projects. In addition, the Site implemented a performance-based fee structure. The significance of this change is that under the PBIMC, DOE only pays the incentive fee when results are delivered, and DOE now manages the contract instead of the contractor.

The implementation of this contract has been a major driver of the significant progress that Rocky Flats has made over the past three years. The contractor's responsibilities include:

- Safely conduct the array of project activities consistent with the closure project baseline, including scope, schedule, and cost.
- Constantly develop alternative project strategies that allow schedule acceleration and increased productivity.
- Accelerate closure without compromising safety, environmental compliance, or safeguards and security.

- Select and manage a subcontractor team that can safely deliver accelerated closure in the shortest possible time.
- Develop and implement a framework for reaching agreement with affected unions under the Davis-Bacon Act.

Closure Project Planning

The change in the Site's mission from production to closure has necessitated a fundamental change in the way in which the Site is managed. A key ingredient in accomplishing accelerated closure is the activity-based planning of Site closure activities. Activity-based planning shifts the focus of management from managing functions to managing the numerous discrete projects that, in total, result in Site cleanup and closure. The three primary project management tools used by the Site are described below:

Project Baseline. The closure project baseline delineates the project's scope, schedule, and cost. The project baseline details the work down to the activity level that is needed to complete the total project scope. Accompanying this baseline is a detailed basis of estimate also at the activity level. A project of this size has over 50,000 discrete activities that will be performed through the closure project. DOE has developed a critical path and project sequencing for a 2006 closure. In addition, in October 1998 the Site will have developed the details of the key activities for FY99 and FY00 required to support a 2006 closure. A complete 2006 detailed baseline is scheduled to be developed by May 1999. To address continued challenges to the plan, re-evaluation of the strategies, and changing circumstances, the baseline will be updated annually. The critical path schedule derived from the project baseline is used by management to track the accomplishment of those key activities that drive the schedule. Annual performance metrics are also derived from the project baseline.

Work Breakdown Structure. The work breakdown structure represents the project scope of work at a level that allows effective management control. The work breakdown structure depicts the closure project as discrete projects where individual work activities are fully defined, quantified, estimated, and scheduled into successive levels of detail. The work breakdown structure is the cornerstone of the Site's budget planning, reporting, and cost control systems and is found in the closure project baseline.

Change Control Management. The change control process is used to adjust the Project Baseline. Any change to the scope of work, major strategies for accomplishing the scope, project cost, or interim or final project schedules and milestones is approved through a process established and managed by the Rocky Flats Closure Project Manager.

Monitoring and Reporting

Monthly project monitoring and reporting occur at both the Site and the Headquarters' level. The Rocky Flats Site conducts a monthly project review meeting between the senior management teams of both the Rocky Flats Field Office and Kaiser-Hill, the Integrating Management Contractor. Progress towards accomplishment of the annual performance metrics is reported, as well as the status of critical project infrastructure and programs such as safety, environmental compliance, and safeguards and security. Issues and barriers are raised for resolution at the Site level.

At monthly meetings described above, the Headquarters Rocky Flats Closure Team monitors project progress at both the Site and the Headquarters level.

Beyond Cleanup and Closure

DOE is currently engaged in discussions with local communities and stakeholders on two issues that affect the final disposition of Rocky Flats. The first is development of a site stewardship plan that defines the final site configuration. This plan addresses the issues such as water resource management and habitat conservation and outlines ongoing environmental monitoring requirements and responsibilities. The second is a decision on the final uses of the land, as well as its eventual ownership. While the Rocky Flats Cleanup Agreement spells out the general end uses of the Site, the agreement does not provide specific guidance. Recently, a coalition of stakeholders found that final decisions on end use could not be made at this time, but should be reserved until later in the cleanup process. The Rocky Flats Field Office will continue to work with local communities and stakeholders to develop appropriate public forums for the discussion and resolution of these important issues.

6.0 Conclusion

This management plan outlines the Department of Energy's strategy to complete the cleanup and closure of the Rocky Flats Environmental Technology Site by 2006. This is a very ambitious undertaking that will require the continued focus of major elements of the Department to succeed. As the issues discussed in this plan are solved, others will surface. The success of this project depends not only on solving the specific issues identified in this document, but in maintaining a commitment and an infrastructure that can keep the Department focused on the ultimate goal of safe, accelerated closure. A sustained commitment and focus on evolving issues affecting the closure of Rocky Flats will enable the Department to reach its goal.

The Department of Energy expects to be held accountable for this plan — for its organizational elements, for its specific interim milestones, and for its ultimate goal. This plan is obviously ambitious. Many of its elements require actions that are difficult for the Department to control. But that is not and cannot be an excuse for avoiding accountability. It is the Department's responsibility to take the initiative and to demonstrate the leadership to close Rocky Flats safely and on schedule. The Department of Energy is blessed with employees with tremendous energy, knowledge, and creativity. There is no doubt that by working together, with strong leadership, DOE will close Rocky Flats by 2006.

The closure of Rocky Flats is already underway, and in eight and one-half years the clean up will be complete. A major facility, part of the nuclear weapons complex that once supplied nuclear weapons components that helped win the Cold War, but one that created the environmental legacy, will be permanently closed. This closure project will be a clear demonstration that the federal government can take on and complete major environmental actions. The project will also serve as a fitting and final epitaph to the Cold War.

Appendix A: 2006/2010 Critical Paths

Notes on Critical Path

The critical paths for closure in 2006 and 2010 are depicted on page 20. In order to accelerate closure to 2006, the following major enhancements must be made:

1. The shipment of plutonium metals and oxides must begin in January 2000 and be completed in December 2002. This action represents a two year acceleration from the 2010 closure project baseline.
2. The Rocky Flats workforce must perform deactivation and decommissioning while also performing stabilization, packaging, and shipping missions.
3. Rocky Flats must be able to direct dispose, without further processing, certain residues that do not require additional processing in order to meet the Waste Isolation Pilot Plant Waste Acceptance Criteria.
4. The Rocky Flats workforce must develop the capability to construct the final closure cap in parallel with other closure activities and decrease cap construction time by one year.

Appendix B: Specific Commitments

DOE Headquarters and the Site have developed an action plan to achieve the *Closure 2006* objective. Major actions to achieve each strategic initiative are described below.

Strategic Initiative 1

Accelerate Shipment of Materials and Wastes from Rocky Flats

1. **Plutonium.** Rocky Flats has 9.8 MT of plutonium pits, metals, and oxides that need to be shipped off site by 2002 to support a 2006 closure. To meet this commitment, the following actions, milestones, and assignments have been established:

1.a Action: Rocky Flats' plutonium inventory must be shipped to another site. In order to accomplish this action, two actions must occur. First, DOE must validate the National Environmental Policy Act (NEPA) review for the material which will be moved to the Savannah River Site (SRS). A supplement analysis and an amendment to the Storage and Disposition Programmatic Environmental Impact Statement (PEIS) Record of Decision (ROD) are being prepared. Second, DOE must complete the NEPA review for the Surplus Plutonium Disposition EIS and issue a ROD.

Responsible: MD-1, EH-1, and EM-1

Milestone: Validate NEPA review by July 1998
Select immobilization site by February 1999

- 1.b Action:** Complete shipment of plutonium pits to Pantex

Responsible: Managers, Rocky Flats Field Office and Albuquerque Operations Office

Milestone: February 1999

- 1.c Action:** Complete modification of SRS K-Area plutonium storage facility, pending completion of NEPA review

Responsible: Manager, Savannah River Operations Office

Milestone: December 1999

1.d Action: Begin packaging plutonium metals and oxides in long-term storage configuration in compliance with DOE 3013 standard

Responsible: Manager, Rocky Flats Field Office

Milestone: December 1999

1.e Action: Begin shipping plutonium metals and oxides to SRS, pending completion of the NEPA reviews

Responsible: EM-1 and Managers of Savannah River Operations Office and Rocky Flats Field Office

Milestone: January 2000

1.f Action: Complete packaging of plutonium metals and oxides

Responsible: Manager, Rocky Flats Field Office

Milestone: May 2002

1.g Action: Complete shipping of plutonium metals and oxides to SRS, pending completion of the NEPA reviews

Responsible: Managers, Rocky Flats Field Office and Savannah River Operations Office

Milestone: December 2002

2. Plutonium Residues. Rocky Flats has 106 MT of plutonium residues that contain 3.1 MT of plutonium and need to be treated, packaged, and/or shipped to a receiver site by 2003 to support a 2006 closure. To meet this commitment, the following actions, milestones, and assignments have been established:

2.a Action: Begin processing/repackaging salt residues

Responsible: Manager, Rocky Flats Field Office

Milestone: Complete

2.b Action: Begin processing/repackaging of wet combustible residues

Responsible: Manager, Rocky Flats Field Office

Milestone: Complete

2.c Action: Issue the Rocky Flats Residues and Scrub Alloy EIS for processing residues and scrub alloy

Responsible: EM-1, EH-1, and GC-1

Milestone: July 1998

2.d Action: Issue the ROD for Rocky Flats Residues and Scrub Alloy EIS

Responsible: EM-1, EH-1, and GC-1

Milestone: August 1998

2.e Action: Sign shipper/receiver agreements

Responsible: Managers, Rocky Flats Field Office and Savannah River Operations Office

Milestone: August 1998

2.f Action: Begin processing/repackaging ash residues

Responsible: Manager, Rocky Flats Field Office

Milestone: August 1998

2.g Action: Begin shipping sand, slag, and crucible residues to SRS

Responsible: Managers, Rocky Flats Field Office and Savannah River Operations Office

Milestone: September 1998

2.h Action: Begin shipping scrub alloy residues to SRS

Responsible: Managers, Rocky Flats Field Office and Savannah River Operations Office

Milestone: June 1999

2.i Action: Begin shipping fluoride residues to SRS

Responsible: Managers, Rocky Flats Field Office and Savannah River Operations Office

Milestone: November 1999

2.j Action: Complete shipping scrub alloy residues to SRS

Responsible: Managers, Rocky Flats Field Office and Savannah River Operations Office

Milestone: December 1999

2.k Action: Complete shipping sand, slag and crucible residues to SRS

Responsible: Managers, Rocky Flats Field Office and Savannah River Operations Office

Milestone: June 1999

2.l Action: Complete processing/repackaging salt residues

Responsible: Manager, Rocky Flats Field Office

Milestone: June 2000

2.m Action: Complete processing/repackaging ash residues

Responsible: Manager, Rocky Flats Field Office

Milestone: June 2000

2.n Action: Complete processing/repackaging wet combustible residues

Responsible: Manager, Rocky Flats Field Office

Milestone: July 2001

2.o Action: Complete all processing, packaging, and shipping of residues

Responsible: Manager, Rocky Flats Field Office; Manager, Selected Receiving Sites

Milestone: October 2003

3. Enriched Uranium. Rocky Flats has approximately 6.7 tons of enriched uranium that is still required for national security purposes. This uranium must be processed and shipped by 1999 to support a 2006 closure. To meet this commitment, the following actions, milestones, and assignments have been established:

3.a Action: Begin shipping national security uranium to Oak Ridge

Responsible: DP-1 and Managers, Oak Ridge Operations Office and Rocky Flats Field Office

Milestone: August 1998

3.b Action: Complete shipping of national security uranium to Oak Ridge

Responsible: Managers, Rocky Flats Field Office and Oak Ridge Operations Office

Milestone: October 1999

- 4. Transuranic (TRU) Waste.** Rocky Flats has approximately 1,500 cubic meters of TRU waste in its backlog and will generate another estimated 8,000 cubic meters of TRU wastes by the processing of residues and the decommissioning and demolition of nuclear facilities through closure. To support a 2006 closure, the following actions, milestones, and assignments have been established:

4.a Action: Secure Carlsbad Area Office shipper certification

Responsible: Manager, Rocky Flats Field Office

Milestone: Complete

4.b Action: Complete the Environmental Protection Agency (EPA) certification audit to send TRU waste to the Waste Isolation Pilot Plant (WIPP)

Responsible: Manager, Rocky Flats Field Office

Milestone: July 1998

4.c Action: Open WIPP; begin shipping non-mixed TRU wastes to WIPP

Responsible: GC-1 and EM-1

Milestone: August 1998

4.d Action: Obtain WIPP RCRA Part B permit from New Mexico to receive TRU mixed (TRUM) wastes; begin shipping TRUM wastes to WIPP

Responsible: GC-1 and EM-1

Milestone: December 1998*

4.e Action: Complete shipping of TRU and TRUM waste to WIPP

Responsible: Manager, Rocky Flats Field Office

Milestone: December 2005

- 5. Low Level Mixed Waste (LLMW).** Rocky Flats will need to dispose of approximately 80,000 cubic meters of LLMW generated through waste processing and decommissioning and demolition of contaminated facilities during closure. To support a 2006 closure the following actions, milestones, and assignments have been established:

5.a Action: Issue the Waste Management Programmatic EIS ROD for LLMW

Responsible: EM-1, EH-1, and GC-1

Milestone: December 1998

5.b Action: Begin shipping of LLMW containing less than 10 nanocuries per gram (10nCi/gram) material

Responsible: Manager, Rocky Flats Field Office

Milestone: Complete

5.c Action: Begin shipping LLMW containing greater than 10nCi/gram of fissile material to the designated receiver site

Responsible: Manager, Rocky Flats Field Office

Milestone: October 1999

5.d Action: A receiver site for LLMW will remain open

Responsible: EM-1

5.e Action: Complete all shipments of LLMW

* The State of New Mexico Ecology Division controls the issuance of the final RCRA Part B permit. The Division issued a draft permit in May 1998. The Division has indicated that, at the conclusion of a public comment period, a revised draft permit will be issued in October 1998. The final permit will be issued after a hearing.

Responsible: Manager, Rocky Flats Field Office

Milestone: March 2006

- 6. Low Level Waste (LLW).** Rocky Flats will need to dispose of approximately 66,000 cubic meters of LLW generated through waste processing and decommissioning and demolition of contaminated facilities through closure. Rocky Flats is currently shipping LLW to the Nevada Test Site (NTS). To support a 2006 closure the following actions, milestones, and assignments have been established:

6.a Action: Complete all shipments of LLW

Responsible: Manager, Rocky Flats Field Office

Milestone: March 2006

- 7. Excess Property.** Rocky Flats will need to dispose of approximately 1 million line items of excess property through closure. To support a 2006 closure the following action, milestone, and assignment have been established:

7.a Action: Develop a comprehensive strategy to dispose of personal property utilizing authority granted under Section 161(g) of the Atomic Energy Act

Responsible: FM-1 and Manager, Rocky Flats Field Office

Milestone: July 1998

- 8. Records.** Rocky Flats will need to dispose of approximately 90,000 cubic feet of records, including 1,200 cubic feet of classified records and 900 cubic feet of potentially contaminated records through closure, ensuring that important historical records are retained. To support a 2006 closure the following actions, milestones, and assignments have been established:

8.a Action: Develop a joint records management pilot project establishing a cost-effective process for dispositioning records management from closed DOE nuclear weapons complex facilities

Responsible: HR-1, EM-1, and Manager, Rocky Flats Field Office

Milestone: October 1998

8.b Action: Develop a cost-effective process for dispositioning radiologically- and beryllium-contaminated records

Responsible: HR-1, EM-1, and Manager, Rocky Flats Field Office

Milestone: January 1999

Strategic Initiative 2

Minimize Construction of New Facilities or Process Capabilities at Rocky Flats

Three areas of particular concern are:

1. A new, special nuclear materials (SNM) storage vault will not be constructed at Rocky Flats. Therefore, SNM, which includes pits, metals and oxides, and greater than 10 weight percent plutonium residues, must be shipped off site. Initial shipments of metals and oxides must begin in January 2000. If the Rocky Flats Closure Project Team is precluded from shipping its SNM to other locations, the cost to construct, operate, and decommission a facility to store SNM is approximately \$43 million to construct, \$40 million per year to operate, and \$8 million to decommission.
2. A new TRU/TRUM storage facility will not be constructed at Rocky Flats. Therefore, TRU/TRUM wastes must be shipped to WIPP. If WIPP is not receiving waste by August 1998, the Rocky Flats Closure Project Team will take action to begin the design of a TRU/TRUM waste storage facility. The facility must be constructed and operational by January 2000 to preclude any schedule delay to the closure project. If DOE is not able to accomplish the opening of WIPP, the cost to construct, operate, and decommission a TRU/TRUM storage facility is approximately \$35 million to construct, \$8 million per year to operate, and \$5 million to decommission.
3. A new LLW/LLMW storage facility will not be constructed at Rocky Flats. Therefore, a waste disposal facility must be identified to receive LLMW containing greater than 10nCi/gram, and that facility must remain available to receive both LLW and LLMW. If DOE cannot identify a LLW and LLMW waste storage facility, the cost to construct, operate, and decommission a facility to store LLW and LLMW is \$23 million to construct, \$10-15 million per year to operate, and \$3 million to decommission.

To achieve the goal to eliminate the construction of new facilities or process capabilities at Rocky Flats, the following actions, milestones, and assignments have been established:

- a. Action:** Complete a formal agreement with the regulators on the disposition of rubble from the demolition of facilities

Responsible: Manager, Rocky Flats Field Office

Milestone: December 2002
- b. Action:** Complete demolition and/or documented disposition of all nuclear facilities

Responsible: Manager, Rocky Flats Field Office

Milestone: December 2005
- c. Action:** Complete the demolition and/or documented disposition of all Site facilities

Responsible: Manager, Rocky Flats Field Office

Milestone: December 2006

Strategic Initiative 3

Organize for Closure

- a. Action:** Develop a preliminary personnel resource management plan to ensure retention of critical federal staff through closure

Responsible: FM-1, EM-1, and Manager, Rocky Flats Field Office

Milestone: Completed
- b. Action:** Submit a comprehensive staffing plan to support retention of critical federal staff

Responsible: Manager, Rocky Flats Field Office

Milestone: October 1998
- c. Action:** Develop a comprehensive personnel resource management plan to ensure retention of critical contractor staff through the closure of Rocky Flats

Responsible: President, Kaiser-Hill

Milestone: October 1998
- d. Action:** Organize federal and contractor staffs to focus on closure

Responsible: Manager, Rocky Flats Field Office and President, Kaiser-Hill

Milestone: December 1998

Strategic Initiative 4

Develop and Execute a Business Strategy Consistent with Accelerated Closure

- a. Action:** Approve contracting strategy consistent with the accelerated closure mission of the Site

Responsible: S-2, EM-1, HR-5, and Manager, Rocky Flats Field Office

Milestone: Completed

- b. Action:** Develop a comprehensive NEPA strategy that ensures adequate and timely reviews for Rocky Flats actions so that the NEPA review is consistent with and supportive of the accelerated schedule

Responsible: EM-1, EH-1, GC-1, and Manager, Rocky Flats Field Office

Milestone: July 1998

- c. Action:** Establish change control management of the closure project life cycle baseline

Responsible: Manager, Rocky Flats Field Office

Milestone: October 1998

- d. Action:** Implement a process for expediting the issuance of security clearances as well as a process to quickly activate clearances for short-term work

Responsible: NN-1 and Manager, Rocky Flats Field Office

Milestone: October 1998

- e. Action:** Publish a project annual report and periodic project update reports

Responsible: EM-1 and Manager, Rocky Flats Field Office

Milestone: December 1998

- f. Action:** Develop and implement contract incentives to drive the safe closure of the Site

Responsible: HR-5 and Manager, Rocky Flats Field Office

Milestone: December 1998

g. Action: Develop a 2006 Project Life Cycle Baseline

Responsible: Manager, Rocky Flats Field Office

Milestone: May 1999

h. Action: Complete an independent validation of the 2006 life cycle baseline

Responsible: FM-1

Milestone: October 1999

i. Action: In conjunction with stakeholders and communities, propose the specific follow-on land uses for the Site

Responsible: Manager, Rocky Flats Field Office

Milestone: October 2004

j. Action: Develop a draft ROD based on the final end state determination

Responsible: Manager, Rocky Flats Field Office

Milestone: October 2005

k. Action: Develop a long-term surveillance and monitoring plan consistent with the draft ROD

Responsible: Manager, Rocky Flats Field Office

Milestone: January 2006

KEY

S-2 Deputy Secretary of Energy

EM-1 Assistant Secretary of Environmental Management

GC-1 General Counsel

EH-1 Assistant Secretary for Environment, Safety, and Health

HR-1 Assistant Secretary for Human Resources and Administration

DP-1 Assistant Secretary for Defense Programs

NN-1 Director, Office of Nuclear Non-Proliferation

FM-1 Director, Field Management

MD-1 Director, Office of Fissile Material Disposition

WT-1 Director, Office of Worker and Community Transition